

Section 9 - Appendices

Acronym List

AATS	AMOS Acquisition Telescope System (finder on the 1.6-meter)
ABMA	Army Ballistic Missile Agency
ACO	Administrative Contracting Officer
ACONS	AMOS Control Software
ADA	Advanced Data Analysis
ADAP	Advanced Data Analysis Program
ADAPS	Atmospheric Data Acquisition and Processing System
ADATS	AMOS Data Transmission System
ADCCP	Advanced Data Communication Control Procedure
ADCOM	Aerospace Defense Command (now AFSPACECOM)
ADI	Air Defense Initiative
ADONIS	AMOS Daytime Optical Near-infrared Imaging System
AEOS	Advanced Electro-Optical System (the new telescope facility, first light in 1997)
AESOP	AMOS Ephemeris Satellite Orbit Predictor (AMOS Software)
AFSPACECOM	Air Force Space Command, now called AFSPC
AFOSH	Air Force Occupational Safety and Health
AFOSR	Air Force Office of Scientific Research
AFSPC	Air Force Space Command
AIAA	American Institute of Aeronautics and Astronautics
ALOFT	AMOS Large Optical Test Facility
AMOS	Air Force Maui Optical Station, an acronym of historical importance, refers to the 1.6-meter telescope and related programs.
AMTA	Advanced Multicolor Tracker for AMOS (infrared radiometric array on the 1.2-meter)
ANSI	American National Standards Institute
AOA	(Army) Airborne Optical Adjunct
AOS	Acquisition Of Signal
ARPA	Advanced Research Projects Agency (now DARPA)
ASAT	Anti Satellite

ASC	AUTODIN Switching Center
ASCII	American Standard Code for Information Interchange
ASN	AMOS Star Number
ASP	Atmospheric Sensor Package (Seeing Monitor) or
	Analog Signal Processor
ASR	AMOS Spectral Radiometer (Infrared sensor on 1.6-meter side Blanchard, removed 1994)
asteroid	A small body, up to several hundred km, orbiting the Sun in the space between Mars and Jupiter, called the asteroid belt. Over 3,000 have been catalogued and not all have orbits totally within the belt. Current theory of dinosaur extinction features an asteroid collision with the earth.
ATM	Atmosphere
ATN	AMOS Test Number
ATP	Acquisition, Tracking, and Pointing
AUTODIN	Automatic Digital Network
AUTOVON	Automatic Voice Network
AZ	Azimuth
BATS	BDT Acquisition Telescope System (finder on the BDT)
Baud	number of digital units transmitted per second
Baudot	five unit digital code for transmission of teletype data
BDT	Beam Director Tracker (also termed BD/T)
BET	Best Estimate of Trajectory
BIB	Blocked Impurity Band (Type of detector)
Blanchard	Precision-ground instrument mounting surfaces.
BLIP	Background limited infrared photoconductor
BMD	Ballistic Missile Defense
BMO	Ballistic Missile Office
BPI	Bits Per Inch
BPS	Bits Per Second
BRDF	Bi-directional Reflectance Distribution Function
Bus	Upper stage of ICBM from which RVs are deployed.
Bus	Communications path that handles multiple signals.
byte	A group of 8 bits

CCD	Charge Coupled Device
CCIR	Consultative Committee International Radio
CCRB	Configuration Control Review Board
CDRL	Contract Data Requirements List
CDUA	Conservation District Usage Application
CFA	Controlled Firing Area
CIC	Combined Intelligence Center
CID	Charge Injection Device
CIK	Crypto Ignition Key (enabling device for use with STU III)
CIS	Compensated Imaging System (compensates for atmospheric turbulence, on the 1.6-meter telescope, produces visible wavelength video images)
CLIP	Cirrus Lidar Probe (ruby laser and receiver to detect cirrus clouds-removed 1994)
CMP	Contrast Mode Photometer (wide dynamic range visible glint photometer mounted on the 1.2-meter)
C _n ²	Atmospheric Turbulence Structure Parameter
COMSEC	Communications Security
CONUS	Continental United States
CPU	Central Processing Unit
CRT	Cathode Ray Tube
CSSO	Computer System Security Officer
CVF	Circular Variable Filter (changes spectral characteristics smoothly with rotation)
CW	Continuous Wave (characteristically unmodulated)
DARPA	Defense Advanced Research Projects Agency
DBMS	Data Base Management System
DCAC	Defense Communication Agency Circular
DCP	DTS Calibration Parameters file
DCS	Defense Communications System
Dec	Declination (one axis of an equatorial telescope mount, see Pol).
DIAL	Differential Absorption LIDAR
DIS	Defense Investigative Service
DoD	Department of Defense

DoE	Department of Energy
DPS	Data Processing System
DRAM	Dynamic Random Access Memory
DSP	Digital Signal Processor
DTS	Data Transmission System
EA	Environmental Assessment
ECI	Earth Centered Inertial (coordinate system)
ECM	Electronic Counter Measures
ECR	Earth Centered Rotating (coordinate system)
ELINT	Electronic Intelligence
ELSI	Enhanced Long Wave Spectrometer/Imager (Infrared imaging array sensor having both medium and longwave 128 X 128 arrays)
EMI	Electro-Magnetic Interference
E-O	Electro-Optical . . . (an adjective)
EORSAT	ELINT Ocean Reconnaissance Satellite
ERTS	Earth Resources Technology Satellite
ESCC	Experiment Scoring and Control Center (e.g., the antenna farm in Kihei during the RME program)
ETR	Eastern Test Range
EVA	Extra-Vehicular Activity
FACSFAC	U. S. Navy Fleet Area Control and Surveillance Facility, located on Ford Island, Pearl Harbor, Oahu HI.
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FCL	F-Center Laser
FFT	Fast Fourier Transform
FLIR	Forward-Looking Infrared (an infrared night vision device)
f/	"f" number, the ratio of the focal length to the aperture in optics
FOV	Field-of-View (typically in degrees, arc minutes, or arc seconds)
FPA	Focal Plane Array (examples are the ELSI arrays)
FSO	Facility Security Officer

FTD	Foreign Technology Division, AFSC
FWHM	Full width at Half Maximum (refers to laser beam diameter, typically)
GBL	Ground-Based Laser system
GFE	Government-Furnished Equipment
GEODSS	Ground based Electro-Optical Deep Space Surveillance
GFP	Government-Furnished Property
GLIDS	Gray Level Indicating Display System (part of the electronics of the CIS)
GOES	Geostationary Operational Environmental Satellite
GPS	Global Positioning System
HANG	Hawaiian Air National Guard
HBF	Horizon Break File
HEL	High Energy Laser
HOE	Homing Overlay Experiment
hoku	Hawaiian word for star.
HST	Hawaiian Standard Time (Hawaii does not use Daylight time) also
	Hubbell Space Telescope
IAU	International Astronomical Union
IBC	Impurity Band Conduction, a class of detectors.
ICI	Imagery/Communication Interface
IDPS	Image Data Production System (Software for assisting analysis of image data)
IMSAT	Imaging Satellite
IRAPS	Image Recording and Processing System
IRCCD	Infrared Charge Coupled Device
IRIG	Inter-Range Instrumentation Group (sets range instrumentation standards)
IRIG-B	A timing standard format based on 100 pps.
IRIS	3-dimensional graphics workstation by Silicon Graphics, Inc. also
	InfraRed Information Symposium

IRV	Inter-Range Vector
ISIT	Intensified Silicon Intensifier Target
ISM	Industrial Security Manual
ISO	International Standards Organization
ITV	Instrumented Test Vehicle
IUS	Inertial Upper Stage
JANAP	Joint Air Force, Navy, Army Publication
JDN	Julian Day Number
JEDEC	Joint Electronic Devices Engineering Committee
JSIC	Joint Space Intelligence Center
JSC	Johnson Spaceflight Center
makai	Hawaiian for the sea, toward the sea, seaward.
kona	Hawaiian word for leeward side or leeward coast.
KTF	Kauai Test Facility (for test launches, operated by Sandia from the Hawaiian island of Kauai)
LBD	Laser Beam Director
LCEF	Launch Centered, Earth-Fixed (coordinate system)
LLTV	Low Light Level Television (sensitive camera on the B37 telescope)
LN ₂	Liquid Nitrogen
LORAN	Long Range Aid to Navigation (has become obsolete January 1993, replaced with GPS)
LOS	Line-of-Sight
LPM	Lines Per Minute
LWIR	Long Wave Infrared
mag-tape	magnetic tape data storage medium
MAIS	MOTIF Advanced Imaging System (Fast-aperture visible imaging system on the B37 telescope)
MATS	MOTIF Acquisition Telescope System (finder on the 1.2-meter telescopes)
mauka	Hawaiian word for inland, toward the mountain.
mauna	Hawaiian word for mountain, Mauna Kea is "White Mountain".

Mb	megabyte
MCS	Mount Control System
MIDAS	MOTIF Integrated Data Applications System (software-running on Silicon Graphics SGI 4D/210 GTX))
MIOP	Mission Instruction and Operation Plan (scenario document governing execution of a mission)
MISPREP	Missile Preparation (software for preparing for observation of missile launches).
MM	Mount Model (part of Mount Control software that accounts for individual mount/sensor peculiarities)
MMP	Monthly Maintenance Plan
moana	Hawaiian word for ocean.
MOTIF	Maui Optical Tracking and Identification Facility (The dual 1.2-meter telescopes, mounts, and the attached sensors-historical)
MOU	Memorandum of Understanding
MOA	Memorandum of Agreement
MPA	Mission/Payload Assessment (a mission of the MSSS)
MPLAN	Mission Planning Program
MPM	Monolithic Piezoelectric Mirror (the deformable mirror used for phase compensation in the CIS)
MR	Maintenance Report (document used to report a deficiency and to record the repair effort)
MSDS	Material Safety Data Sheet (applies mainly to chemical agents)
MSSC	Maui Space Surveillance Complex
MSSS	Maui Space Surveillance Site (includes AMOS, MOTIF, and GEODSS).
MSS	Mission Support Software
MTF	Modulation Transfer Function (a measure of fidelity of an imaging system)
M_v	Apparent Visual Magnitude
MWIR	Medium Wavelength Infrared
NASA	National Aeronautic and Space Administration
NAVAID	Navigational Aid
NBS	National Bureau of Standards

ND	Neutral Density (optical filters to change intensity without altering the spectral characteristics)
NOAA	National Oceanic and Atmospheric Administration
NORAD	North American Air Defense Command
NTSC	National Television Standards Committee
OCF	Object Correlation File
OCPREP	Object Correlation Preparation
OCR	Optical Character Reader
OCS	Observatory Control System
PA	Predictive Avoidance (blocking laser radiation, with an opaque barrier, when the target lines up with another object that is not to be illuminated)
PHIAT	Passive Hybrid Imaging on the AMOS 1.6-meter Telescope (a special imaging camera program using an output port of the CIS)
PIPE	Parallel Image Processing Engine.
PL	Phillips Laboratory (main location, Kirtland Air Force Base, Albuquerque NM)
PM	Preventive Maintenance (scheduled maintenance performed periodically to maintain operational status)
PMEL	Precision Measurement Equipment Laboratory (an Air Force calibration laboratory with Bureau of Standards traceability. One is located at Hickam AFB, Oahu)
PMR	Pacific Missile Range-Pt Mugu CA
PMRF	Pacific Missile Range Facility-Barking Sands, Kauai HI
PMT	PhotoMultiplier Tube (vacuum tube device capable of extremely high gain, can count photons).
POC	Point of Contact
Pol	Polar (one axis of an equatorial telescope mount, points to the celestial pole, see Dec).
POL	Polar, geometric coordinates (pointing location) of an object
PPE	Personal Protective Equipment (gloves, goggles, ear plugs, etc.)
PtSi	Platinum silicide infrared CCD (removed 1994)
puka	Hawaiian for hole that goes all the way through, aperture, or gateway

QA	Quality Assurance
QDP	Qualified Data Package
RA	Right Ascension (an astronomical measure of location in sidereal time).
RAID	Redundant Array of Inexpensive Disks, A method of recording data at very high rates.
RMET	Routine Meteorological data (temperature, wind speed and direction, etc., also rmet)
rms	Root Mean Square
r_o	Atmospheric Correlation Scale Length (a measure of "seeing" ability). Fried's coherence diameter, the diameter over which the phase shift is one radian, which is the diameter of a "perfect" telescope that would resolve down to the diffraction limit for its aperture. The parameter varies from moment to moment and is a result of the turbulent mixing of air "cells" of different temperatures.
ROM	Rough Order of Magnitude, applied typically to cost estimates, or
	Read Only Memory, computer memory that is permanent, non-volatile.
RS-232	Industry standard computer connection
SAC	Strategic Air Command, now part of USAFAWC
SAO	Smithsonian Astrophysical Observatory
SAR	Special Analysis Report
SAR	Synthetic Aperture Radar
SATPREP	Satellite Ephemeris Preparation (software)
SC	Strategic Command
SDP4	NORAD Perturbation Model for propagation of Deep space satellite elements
SGP4	NORAD Perturbation Model for propagation of Near Earth satellite elements
SIGTRANS	Signal Transmissions
SIMAN	System for Interactive Multispectral ANALysis
SIT	Silicon Intensifier Target
SMC	Space and Missile Center

SMPTE	Society of Motion Picture & Television Engineers (sets TV Standards)
SNR	Signal-to-Noise Ratio
or snr	
SOA	Special Operating Area (refers to airspace under DoD control)
SOC	Surveillance Operations Center (main control room at the MSSS)
SOI	Space Object Identification (a mission of the MSSS)
SOR	Starfire Optical Range (optical facility at Phillips Laboratory in New Mexico)
SPADOC	Space Defense Operations Center (System in Cheyenne Mt. CO)
SPIE	The International Society for Optical Engineering
SSN	Space Surveillance Network
STS-#	Space Transportation System-number (refers to the shuttle of a particular mission number)
TEA	Transverse Electric field excitation Atmospheric pressure (a kind of laser, typically producing gain-switched pulses)
TEMPEST	Security standard for computers and data handling electronic hardware, to prevent compromising of the data being processed.
TCG/R	Time Code Generator/Reader
TFR	Tightly Folded Resonator (A kind of diode pumped neodymium laser)
TGS	Transportable Ground Station
TMDE	Test, Measurement, and Diagnostic Equipment (this equipment should have calibrations traceable to the National Bureau of Standards)
TOO	Target Of Opportunity
TTY	Teletypewriter; two unit digital signal for transmission of data
U-Matic	3/4 inch industrial video tape cassette format
UCT	Uncorrelated Target
UNIX	Computer operating system/trademark of Bell Laboratories
USNO	U.S. Naval Observatory, defines UTC

UTC	Coordinated Universal Time, (GMT) or (Z) as defined by the USNO.
VAFB	Vandenberg Air Force Base (California launch site for Western Test Range)
VCR	Video Cassette Recorder (U-Matic, Hi-8, and VHS are used at MSSS)
VGH	velocity, ground range, and height
VHS	Video Home recording System (1/2-inch video tape cassette)
VIS	visible wavelength data
VPR	Video Production Recorder
VSP	Visible Sensor Package
VTR	Video Tape Recorder
WSMC	Western Space and Missile Center
WTR	Western Test Range
Zulu	Greenwich Mean Time (GMT), also (Z)